

NIH Historical Report on Disease Prevention



HISTORICAL REVIEW AND FUTURE DIRECTIONS



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Introduction



THE NATIONAL INSTITUTES OF HEALTH (NIH) HAD ITS ORIGINS with an act that created the Marine Hospital Service, established during the presidency of John Adams in 1798. The act was created in 1872 and this represented the beginning of an organized national medical research effort by the Federal Government, and was the first time a Surgeon General of the Marine Hospital Service was appointed. A bacteriological laboratory known as the Laboratory of Hygiene was established at the Marine Hospital, Staten Island, New York in 1887; in 1891 the Hygienic Laboratory moved to Washington, D.C. The Marine Hospital Service became the Public Health and Marine Hospital Service in 1902 which in turn became the Public Health Service (PHS) in 1912 where research programs were expanded to include "other-than-communicable diseases". The first PHS "grants" were awarded in 1918, where the Federal Government sought the assistance of scientists through grants. It was the same year the PHS reserve corps was established to cope with an influenza pandemic.

In 1930 the Ransdell Act redesignated the Hygienic Laboratory as the National Institute of Health and created the first research fellowships. In 1937 the NIH was reorganized into eight separate divisions, but it was not until after World War II that the present-day NIH came into existence. The Public Health Service Act of 1944 consolidated and revised existing public health legislation so that NIH was given general authority to conduct research. Under this act the National Cancer Institute (NCI) became a division of NIH. With the transfer of projects to the PHS from the Office of Scientific Research and Development at the end of WWII, and the creation of the Division of Research Grants in 1944, the NIH extramural research grants and fellowships program was initiated. On establishment of the National Heart and Dental Institutes in 1948, the modern NIH was on its way to becoming the large complex organization it is today, consisting of 24 institutes and centers addressing every conceivable biomedical and behavioral research challenge.

Disease Prevention research became an integral part of the NIH research agenda over the last two decades. However, for many of its earlier years the NIH did not make prevention research a priority, and in the eyes of many, greater emphasis was placed on treatment modalities. Only recently has that momentum shifted, attributable in large part to the great strides the biomedical sciences have made in understanding the preventable nature of disease, disability, and premature death. Therefore, it is the purpose of this volume to demonstrate that events occurring at the Congressional, governmental, and even at the presidential level, have influenced this renaissance in prevention efforts as they occurred at the NIH.

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The Revolution in Disease Prevention

Research Priorities in 1980

- Development of less hazardous cigarette.
- Danger of passive smoking not recognized.
- Non-existent knowledge of differences in dietary needs between young and old.
- Role of oral contraceptives regarding hypertension, cancer, circulatory disorders and metabolism.
- Legionnaires' disease not yet identified.
- Cirrhosis of liver (sixth leading cause of death in 1978).
- Benefits/dangers of hormone replacement during menopause.
- Occupational risks regarding specified cancers.
- Development of new or improved vaccines for influenza, hepatitis B, pneumonia, Haemophilus type b.
- Development of test systems for environmental toxicants.

Research Accomplishments by 1996

- Development of less hazardous cigarette abandoned.
- Dangers of passive smoking scientifically recognized.
- Recognized differences in dietary needs between young and old.
- Oral contraceptives proven relatively safe.
- Legionnaires' disease identified.
- Cirrhosis is less a priority in 1996.
- Recognized benefits of hormone replacement for prevention of heart disease and osteoporosis; cancer question unresolved.
- Many occupational cancers are identified.
- Safe vaccines exist for influenza, hepatitis B, pneumonia, Haemophilus type b.
- Excellent environmental toxicant testing systems exist and related human health hazards identified.

Research Priorities in 1980

- Genetic testing systems in developmental stages.
- Benefits of fluoridation questioned.
- Prevention of retrolental fibroplasia in premature infants, and diabetic retinopathy under study as well as improved methods of glaucoma screening.
- Gastrointestinal ulcers are a serious societal problem.
- Safety of mammography for breast cancer screening questioned.
- NCI-recognized that viruses cause cancer in animals; little known about humans.
- Tampon-related toxic shock syndrome is a serious problem.
- Only whole cell pertussis vaccine exists.
- Biotechnology for vaccine development in relative infancy.
- Subunits of elevated blood cholesterol not recognized.

Research Accomplishments by 1996

- Advances in human genome research constantly finding new links to risks for identifiable disease.
- Benefits of fluoridation widely accepted.
- Preventative steps exist for retrolental fibroplasia and diabetic retinopathy; screening for new cases of glaucoma optimized.
- *Helicobacter pylori* identified, making ulcer prevention possible in 85% of cases.
- Mammography considered safe.
- Now estimated that 25% of cancers are directly or indirectly caused by viruses.
- Toxic shock is no longer a problem.
- Existence of acellular pertussis vaccine.
- Vaccines from multiprotein subunits and recombinant DNA now available.
- High and low density lipoprotein cholesterol levels identified and recognized as risk factors for CVD.

Critical Events in Disease Prevention



PREVENTION RESEARCH INCLUDES STUDIES designed to yield results that are applicable to the identification of risks for injury, disability or disease, as well as to the development of interventions that prevent the occurrence or progression of these conditions.

Currently, approximately 25 percent of the NIH budget is devoted to prevention research. Many diseases (polio, measles, hepatitis B, influenza, and pneumonia) are already being prevented by use of vaccines, and it is anticipated that development of new vaccines will prevent other illness such as streptococcal infection, AIDS, other forms of hepatitis, periodontal disease, and herpes simplex virus infections. Vaccines continue to be one of the most powerful tools for disease prevention. Advances in new biotechnology such as genetic engineering have ushered in a new era in vaccine development.

Other areas of research will provide eventual prevention benefits through indirect association. Research in carcinogenesis may provide insight into the causes of lung, bladder, esophageal, and other cancers. Gene therapy, a technique designed to replace or augment a person's own defective gene(s), is one of the newest areas of research, and is being examined by scientists as a potential disease prevention strategy for the future. Accumulated genetic findings are beginning to reveal a person's propensity to one disease or another. It appears that the earliest benefits of learning the genetic code will be in improved diagnosing of disease. Examples are the two genes that have recently been identified that help predict breast cancer and in some cases ovarian cancer and beginning studies are finding genetic patterns that might predict risk for prostate cancer. These discoveries in time will have tremendous impact on public health.



1946

The Framingham Heart Study—Unique National Heart Institute (NHI) funded study in that it was first time epidemiology was applied to study of degenerative or chronic disease, in this case heart disease and strokes. Up to that point, epidemiology (study of an epidemic) was used to study infectious diseases and nutritional epidemics.

This is a longitudinal investigation of multifactorial (constitutional, environmental, and genetic) factors influencing the development of cardiovascular (CVD) in men and women free of those conditions at the outset. In addition to the cohort of 5,209 men and women enrolled in the study, a second sample of nearly equal size consisting of offspring (and their spouses) was established in the 1970's. The offspring cohort permits examining numerous hypothesis about

familial clustering of CVD and CVD risk factors.

1961

The President's Conference on Heart Disease and Cancer, whose participants on March 15 were requested by President John F. Kennedy to assist "in charting the Government's further role in a national attack on these diseases," convenes at the White House and submits its report.

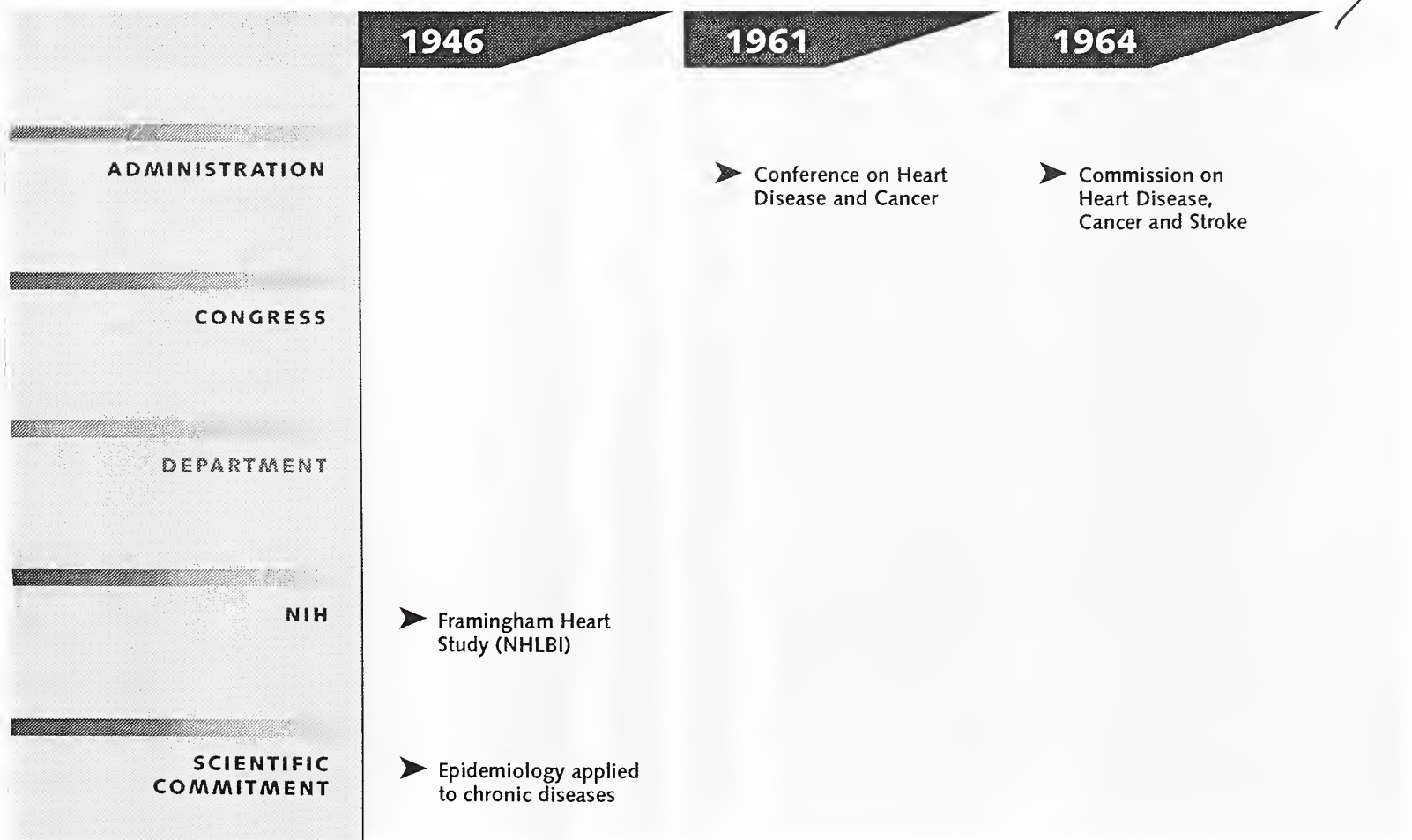
1964

The President's Commission on Heart Disease, Cancer, and Stroke, appointed by President Lyndon B. Johnson on March 7, 1964, submits its December 9 report to "recommend steps that can be taken to reduce the burden and incidence of these diseases."

1971

National Cancer Act of 1971 (P.L.92-218) requests that the Director of the National Cancer Institute "establish programs in the prevention, control, and eradication of cancer." The Senate report language asks that NCI more aggressively pursue cancer prevention so that there can be more effective utilization of existing knowledge and intensified research on preventive measures. In response the NCI initiates the Early Detection and Biomarker Research Program, this program is involved in the identification/evaluation of technologies, and the application of early detection of PAP smears for cervical cancer and use of mammography for detection of breast cancer and their use in medical practice.

The NCI should develop an aggressive and coordinated program to demonstrate the application of recent research



discoveries as rapidly as possible, using whatever community resources are available, and communicate these findings to practitioners where these findings can be applied." The House asked that cancer control programs be reinstated. (House Report No. 92-659, p. 24)

1972

Multiple Risk Factor Intervention Trial for the Prevention of Coronary Heart Disease (MRFIT) – The objective of this trial is to determine for a group of men at high risk of death from coronary heart disease whether a special intervention program to lower serum cholesterol, reduce blood pressure, and eliminate cigarette smoking would result in a significant reduction in mortality from coronary heart disease.

The subjects are men, ages 35-57, selected for elevation of one more of three risk factors—hypertension, hypercholesterolemia, and cigarette smoking; free from previous coronary heart disease; 93 percent white; drawn from various communities of the United States; total sample size was 12,866. This is a randomized, non-blind design with two groups and fixed sample size. The experimental group underwent a modified-fat-diet, antihypertensive therapy, and education related to lifestyle and smoking. Those in the control group were referred to their own physicians for treatment. This study is for a 15 year period.

The NHLBI launches its **National High Blood Pressure Education Program (NHBPEP)**, a program of patient and professional education that has as its

goal to reduce death and disability related to high blood pressure.

The **Heart, Blood Vessel, Lung, and Blood Act (P.L.92-423)** establishes a NHLBI Assistant Director for Health Information Programs to provide health information on cardiovascular and pulmonary diseases, with special emphasis on factors "affecting the prevention of arteriosclerosis and other cardiovascular diseases and of pulmonary diseases." It also establishes heart, blood vessel, lung, and blood disease prevention and control programs and authorizes National Research and Demonstration Centers for Heart, Blood Vessel, Lung, and Blood Diseases for basic and clinical research into, training in, and demonstration of, advanced diagnostic, prevention, and treatment methods.

1971

1972

1972

1972

► National Cancer Act

► National Heart, Blood Vessel, Lung, and Blood Act

► National Cancer Institute Prevention and Control Program

► Multiple Risk Factor Intervention Trial for Prevention of Coronary Heart Disease (MRFIT)

► The NHLBI launches its National High Blood Pressure Education Program (NHBPEP)



1972

The National Cancer Advisory Board recognizes two types of cancer centers: Comprehensive and Specialized. The Comprehensive centers conduct long-term, multi disciplinary cancer programs in biomedical research, clinical investigation, training, and demonstration and community-oriented programs in detection, diagnosis, education, epidemiology, rehabilitation, and information exchange.

1973

The NCI initiates a program to monitor the cancer burden in the U.S. through measurement of cancer incidence, mortality, and survival (Surveillance, Epidemiology, and End Results program—SEER); assess

individual, societal, and health service factors that mediate these measures; assess the impact of cancer.

1974

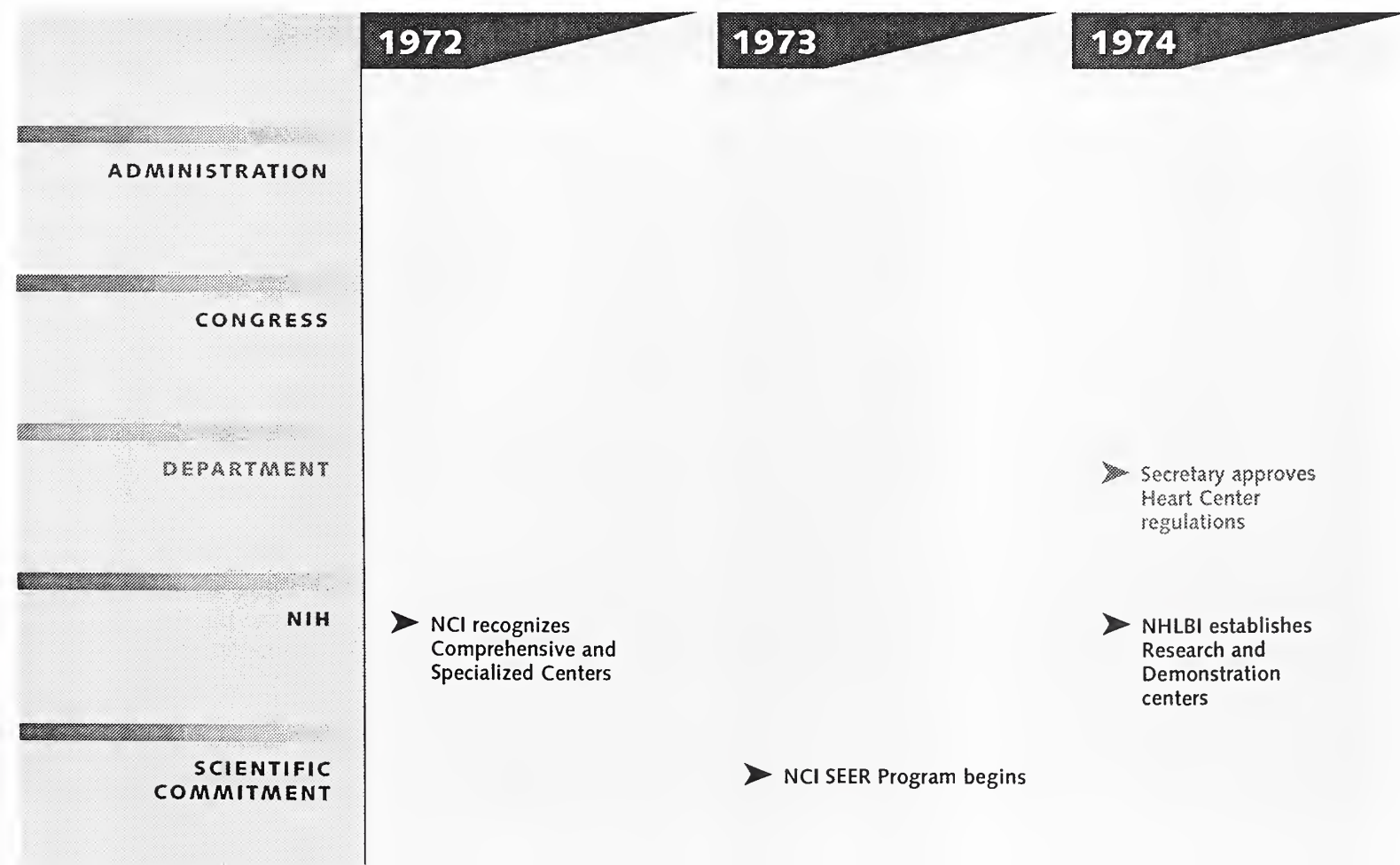
The Secretary, HEW, approves regulations governing the establishment, support, and operation of National Research and Demonstration Centers for heart, blood vessel, lung, and blood diseases, which implement section 415(b) of the PHS Act, as amended by the National Heart, Blood Vessel, Lung, and Blood Act of 1972: (1) to carry out basic and clinical research on heart, blood vessel, lung, and blood diseases; (2) to provide demonstrations of advanced methods of prevention, diagnosis, and treatment; and

(3) to supply a training source for scientists and physicians concerned with the diseases.

1975

The Cancer Control Program now includes 27 demonstration projects for the early detection of breast cancer, established in association with the American Cancer Society.

Cancer cause and prevention activities include research to identify the external factors that are believed to be responsible for up to 90 percent of all cancers. This work is underway at 20 laboratories, including the Frederick Cancer Research Center at Fort Detrick, Maryland.



1976

National Consumer Health Information and Health Promotion Act (P.L.94-317), establishes title XVII of the Public Health Service (PHS) Act that authorizes the Secretary HHS (among other things) to support research, demonstrations and training programs in health information and health promotion, and create within the Department an Office of Health Information and Health Promotion.

The Health Research and Health Services Amendments of 1976 (P.L.94-278) amends NHLBI language to substitute an Assistant Director for Prevention, Education, and Control for the former Assistant Director for Health and Information Programs.

1977

The Biomedical Research Extension Act of 1977 (P.L.95-83) reauthorizes the programs of the NHLBI, with continued emphasis on both the National Program and related prevention and dissemination activities.

Secretary, DHEW, launches a major legislative initiative aimed at disease prevention. The Initiative is intended to draw promising DHEW initiatives (e.g. immunization, nutrition, smoking, fluoridation) into a "single, coherent legislative package."

The major initiative is directed at three areas of greatest concern and largest potential benefit: childhood immunizations, teenage pregnancy, and smoking

and health. It is decided to structure the prevention initiative by Strategy Element. This approach is selected because it: allows for conceptualization; is consistent with agency authority; provides comprehensiveness; and accommodates important interest groups being served. The guiding principles are: 1) magnitude of the problem (i.e., morbidity and mortality); 2) likelihood of decreasing the problem; 3) societal acceptance of preventive measures. DHEW is targeting two groups: pregnant women and children; and a quartet of target problem areas (smoking, nutrition, alcohol, and environment).

1975

1976

1977

- NCI establishes Demonstration projects
- Early detection of breast cancer
- National Consumer Health Information and Health Promotion Act
- Secretary (DHEW) creates Office of Health Information and Health Promotion
- NHLBI establishes position of Assistant Director for Education and Control
- Secretary launches major prevention initiative
- NIH and other PHS agencies respond to secretary's initiative



1977

Dr. David Blumenthal, representing Senator Kennedy's Subcommittee, visits with the Special Committee at NIH and states: **The Subcommittee's principal interest is determining what research NIH is supporting in the area of *prevention* of disease as contrasted to the *cure* of disease.** He asks that prevention be classified as both primary and secondary and further defines it as follows:

Primary Prevention: Research aimed at development of interventions to be employed before the biologic onset of disease, including research and education directed at changing behavior in such a way that disease will be averted or ameliorated;

Secondary Prevention: Research directed toward interventions after the

disease can be detected but before it is symptomatic or recognized, as well as research aimed at preventing further progression of already-established disease. Dr. Blumenthal recognizes that the NIH view of prevention research extends beyond the aforementioned definitions and therefore asks for the BIDs to give a more general statement using the following: **Prevention in the Context of the Mission of the Program of the Responding BID**—giving a brief description of the “state-of-the-art” in the program areas covered.

Director, NIH, Dr. Donald S. Fredrickson, appears before the Senate Subcommittee on Health and Scientific Research, Committee on Human Resources, to present for the first time,

“NIH Biomedical Research Related to Prevention of Disease.” The report is submitted to Senator Edward M. Kennedy, Chairman, and to members of the Subcommittee.

Deputy Assistant Secretary for Health (Special Health Initiatives) requests an inventory of existing NIH supported research on disease prevention (Part I), a table showing funding allocations (Part II), and comments on the relative benefits of disease prevention and health promotion versus a curative strategy (Part III). [CAVEAT] The same definitions utilized in the Kennedy Report are used here, and similar provisos are indicated by the NIH.

1977

1978

ADMINISTRATION

CONGRESS

DEPARTMENT

NIH

SCIENTIFIC COMMITMENT

- Senate staff visits NIH regarding prevention

- Requests NIH Inventory and Research on Prevention

- Director of NIH appears before the Senate Subcommittee on Prevention
- Special (Prevention) Committee appointed

- First Consensus Development Conference on Breast Cancer Screening

- Community Mental Health Centers Act

- ASH releases Report of Prevention Task Force

- Appointment of Coordinator for DPHP
- NIH Submits its first Report on Prevention to Congress and the Secretary, HEW

Deputy Director, NIH, appoints a Special Committee to respond to recurring requests to NIH. The task of the special Committee is outlined in three parts: develop a beginning definition for "research on prevention;" give guidance to the BIDs regarding collection of data; and review the submitted material and provide uniform documentation. It is anticipated the Committee will provide the foundation for institutionalized data collection and that this will be the last time an ad hoc approach to prevention data collection will be required.

The Office of the Director, NIH, and the National Cancer Institute, convene the first in a series of Consensus Development Conferences sponsored by the NIH. The purpose is to assess the benefits and risks of existing methods of breast cancer detection (including clinical

history, physical examination, mammography, and thermography) and to develop recommendations concerning the use of these screening methods. A major impetus for the meeting is recent evidence indicating that the ionizing radiation from mammography might actually cause malignancies while attempting to detect them.

The consensus panel is composed of 16 scientists, clinicians, and lay persons who have no known position on the wide-scale application of breast cancer detection methods. During the course of a three-day meeting held entirely in open session, the panel will hear testimony from interested professionals, associations, and members of the public. The panel also will review the reports of four study groups previously commissioned by the National Cancer Institute to review the existing data related to

breast cancer detection. [Following detailed discussion of the information presented, the panel recommends only limited use of mammography for women who have neither a personal nor familial history of breast cancer. The group urges that women under the age of 35 should not be used for screening purposes. Results from this conference received wide publication.]

1978

Community Mental Health Centers Act of 1978 (P.L.95-622): Director, NCI shall establish and support demonstration, education, and other programs for detection, diagnosis, prevention, and treatment of cancer and for rehabilitation and counseling respecting cancer; Cancer Control Programs Office of NCI to establish information exchange

1979

1980

➤ House and Senate Hearings on Prevention

➤ Health Program Extension Act

➤ Release of Surgeon General's Report on Healthy People 2000

➤ Release of Promoting Health/Preventing Disease: Objectives for the Nation

➤ Deputy Assistant Secretary visits NIH regarding Prevention

➤ Request to NIH for "Early Detection Guidelines"

➤ Director presents Prevention Programs to Congress

➤ NIH-wide Prevention Committee appointed

➤ 1st NIH "working" prevention definition

➤ Appointed Special Assistant of Disease Prevention

➤ Release of Hypertension Detection and Followup Program

➤ NIH/USDA produce Dietary Guidelines



*"We are survival
machines—robot
vehicles blindly
programmed to
preserve the selfish
molecules known
as genes."*

RICHARD DAWKINS

networks between groups of medical practitioners and NCI should "devote substantially more resources to prevention, focusing particularly on the importance of environmental, dietary, and occupational causes of cancer." (House Report 95-1192, p.26).

May 5: Assistant Secretary for Health, Dr. Julius Richmond, requests that NIH respond to the "first draft of the Report of the Prevention Task Force." Director, NIH, Dr. Donald Fredrickson, indicates in a memorandum to the BIDs that this report was formerly called the "PHS Prevention Initiative" under the chairmanship of Dr. J. Michael McGinnis.

May 12: Director, NIH, appoints Dr. John T. Kalberer to the newly created position NIH Coordinator for Disease Prevention and Health Promotion.

May 19: NIH responds to Secretary (DHEW) Califano's request for a Prevention Research Outline but emphasizes that the outline does not include all the NIH research programs identified as prevention related, but only those that fit the definition provided... "to identify new priority research areas related to prevention that would...yield results which can be directly employed to promote health or prevent disease or the progression of presymptomatic disease."

While NIH cites those research programs related to identified priority problem areas, it emphasizes that among the activities identified, there is great variability regarding specificity of research definition and budgetary break-out. The variability is reflective of the responses received from the various institutes. Several institutes find it difficult, if not impossible, to separate out budget requirements for defined programs. The reason given by many institutes is that prevention research is inseparable from all other research. Where it is possible to identify prevention programs, they are

categorized into one of the three following areas: epidemiologic, research, or intervention.

Director, NIH, submits first prevention report to Office of the Assistant Secretary for Health (OASH). Report includes only applied disease prevention programs. It excludes \$40 million in epidemiological research with emphasis on identification of risk factors associated with onset of disease, both genetic and environmental, including lifestyle. It also excludes research on etiology, pathophysiology, and mechanisms of disease, representing a sizable fraction of each BID's program. It emphasizes that research in these areas will ultimately provide the knowledge necessary for the development of future strategies for disease prevention and health promotion.

1979

The Senate Subcommittee on Health and Scientific Research, Committee on Labor and Human Resources, and the House Subcommittee of the Departments on Labor, Health and Human Resources, Education, and Related Agencies, Committee on Appropriations, hold the first hearings having major emphasis on disease prevention, control and demonstration issues. The hearings focus mainly on childhood issues but also addresses NIH research on disease prevention. The Director, NIH, cites the areas of NIH emphasis on disease prevention research: childhood studies; vaccine development; environmental issues and cancer; diet and heart disease, among others.

Deputy Assistant Secretary for Health (Special Health Initiatives) visits NIH and makes a presentation on Departmental "Prevention Initiatives" at Bureau, Institute, Division (BID) Directors Meeting. Key Prevention Initiatives Cited: Creation of Departmental Prevention Task Force whose main responsibility is develop-

ment of first Surgeon General's Report on Disease Prevention and Health Promotion entitled *Healthy People: Framework for National Health Promotion Program and National Health Status Goals and Strategy Targets*; Departmental Task Forces on: Smoking and Health; Sexually Transmitted Disease; and Alcohol Abuse; Childhood Immunization and School Health Initiatives.

Release of *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention*: This is the first Surgeon General's report on disease prevention. The report focuses on individual responsibility for health and emphasizes health by five age categories: Infants; Children; Adolescents and Young Adults; Adults; Older Adults.

The results of the Hypertension Detection and Follow-up Program, a major clinical trial started in 1971, provides evidence that tens of thousands of lives are being saved through treatment of mild hypertension.

1980

The Health Program Extension Act of 1980 (P.L.96-538) reauthorizes the NHLBI, with continued emphasis on both the National Programs and related prevention programs.

Senate language states: The Committee in dealing with the authorities of the NCI, and the NHLBI and in the context of the major portion of this bill, has made several changes bringing the administrative structure of these institutes and their Advisory Councils into greater performance with the other institutes. As is reflected in the authorities of the other institutes in this bill, the Committee is convinced that explicit addition of authorities to mandate additional emphasis and involvement in programs of primary and secondary prevention are appropriate and timely. At the same time, the Committee feels that its

need for information and updating on the progress of the programs of the institutes can be met by the submission of a single report to the President and the Congress by the Directors of the Institutes on a yearly basis. Sec. 403(3) is amended by deleting the wording "the early detection and treatment of cancer," and substituting "the prevention, especially the primary and secondary prevention, and the treatment of cancer. S:96-714 (pg.4, pgs. 17-18, and 28-29).

The Office of the Assistant Secretary for Health (OASH) releases the report *Promoting Health/Preventing Disease: Objectives for the Nation*, establishing the first measurable national health goals and objectives. OASH also produces, with major help from the NIH and USDA the report *Nutrition and Your Health: Dietary Guidelines for Americans*, which is the first effort to educate the public on nutrition.

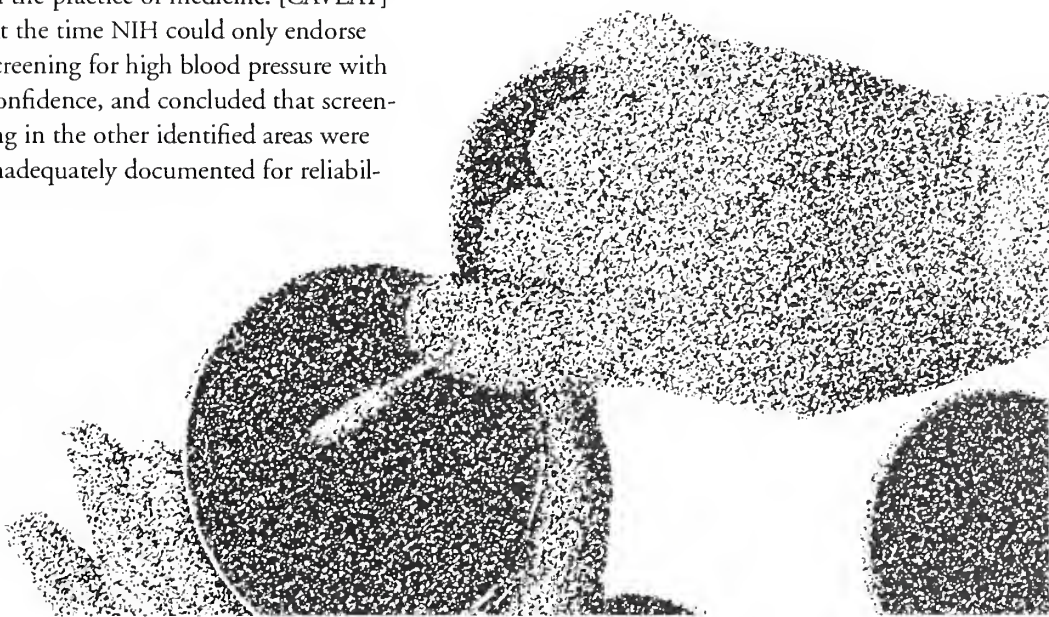
The OASH formally requests that NIH supply existing information on "early detection guidelines" in the following areas: hypertension; diabetes; vision; hearing; amniocentesis; and the following cancer areas: breast, colorectal, lung, and cervical.

This information provides a start for clinical screening guidelines for use in the practice of medicine. [CAVEAT] At the time NIH could only endorse screening for high blood pressure with confidence, and concluded that screening in the other identified areas were inadequately documented for reliability

and therefore could not be unequivocally endorsed. At a later date the first U.S. Preventive Services Task Forces Committee is appointed.]

First NIH-wide Disease Prevention Coordinating Committee appointed. The Committee consists of representatives from each of the Bureaus, Institutes, and Divisions (BIDs) comprising the NIH. The Committee members apply the first NIH "working" disease prevention definition, accounting for research programs and fiscal accountability. The definition overwhelmingly is restricted to projects and programs involving primary prevention. The definition was referred to as a "working" definition because it was the first time research portfolios, including projects supported by grants and contracts, were accounted for.

Acting Director, NIH, appoints a temporary Special Assistant to the Director for Research Related to Disease Prevention. (Dr. John Seal, Deputy Director, NIAID, as a representative of the BIDs on loan to the OD, NIH, to ensure that the BIDs interest in disease prevention counterbalances that of the Department.





1982

Special Assistant to the Director for Research Related to Disease Prevention (Dr. Seal) and ad hoc committee of BID representatives submit a modified prevention definition to the Assistant Secretary for Health for consideration as a substitute for the NIH "working definition."

Director, NIH, sends memorandum to Assistant Secretary for Health (Dr. Edward Brandt) indicating that NIH is not committed to definition proposed by Dr. Seal's ad hoc committee.

Creation of NIH Subcommittee on Adaption of Prevention Definition to Data Processing Requirements.

Cancer Control Initiatives: *Smoking prevention and cessation*—development and demonstration of successful strategies to reduce smoking [e.g., American Stop Smoking Intervention Study (ASSIST)].

Diet & nutrition research—development of specific chemical substances that demonstrate anti-cancer activity in humans; nutritional and molecular regulation, prevention-related epidemiology, clinical trials, nutrition studies; identification/validation of cancer-preventive dietary patterns; encourage/change dietary patterns through information dissemination.

Chemoprevention research—development of chemopreventive agents and their testing in human prevention trials. The results of the Multiple Risk Factor Intervention Trial is released. They support measures to reduce cigarette smoking and to lower blood cholesterol to prevent coronary heart disease (CHD) mortality but raise questions about optimal treatment of mild hypertension.

Dr. Robert S. Gordon now the Special Assistant to the Director for Research Related to Disease Prevention, sends memorandum to Assistant Secretary for Health indicating he will work with OASH in developing a definition suitable to disease prevention research and health promotion.

1982

1983

ADMINISTRATION

CONGRESS

DEPARTMENT

NIH

SCIENTIFIC COMMITMENT

- AdHoc committee submits "modified" Disease Prevention Definition to OASH
- Director, NIH, rejects AdHoc's definition
- Creation of Prevention Data Processing Subcommittee
- NCI Prevention Programs on: Smoking, Diet & Nutrition, and Chemoprevention begin
- Results of MRFIT released

- Lobbying efforts for NIH Institute of Disease Prevention
- Senate cites NIH/ADAMHA to study behavior and prevention
- BIDs approve new "broadened" definition
- BIDs account FY83 portfolio using new definition
- NCI CCOP and Special Populations Studies begin
- Coronary Artery Surgery Study (CASS) results released

1983

The President of the Association of Schools of Public Health (ASPH), William F. Bridges, M.D., testified before Congress on September 11, 1983 asking for the creation of a new institute at NIH... "national institute of health, of public health, of health preservation, or some similar title." It was further stated that "in addition to general support for this within the ASPH, some individual schools have taken the position that this is now needed in order to give these prevention-promotion oriented studies institutional identify and status in keeping with their importance to the nation." During this period the Centers Research and Demonstration on Health Promotion and Disease Prevention is working its way through both houses of Congress. (Program ended up in CDC).

The Senate Committee states that... "NIH and ADAMHA need to look very carefully at this matter to determine how research in the life sciences can be broadened to embrace the role of human behavior in preventing and curing disease. One example of disease prevention research by the NIH is the recent epidemiologic evidence that diet may play a role in the prevention of cancer. Worldwide epidemiological studies indicate that there appears to be a significant lower incidence of cancer in people who consume large quantities of vegetables whose principal component is beta carotene, the precursor to Vitamin A. The Committee is pleased that the National Cancer Institute and the National Heart, Lung and Blood Institute are jointly funding a study to

examine the effects of beta carotene and encourages such cooperative efforts in the area of disease prevention." S: 97-680 (pg. 31)

BIDs approve, in principal, proposed broadened NIH definition for prevention research. This definition includes prevention-related research that is basic in nature, including research on etiology of disease and epidemiologic studies.

BIDs accounted for FY 83 prevention portfolios utilizing broadened definition.

NCI Community Clinical Oncology Program (CCOP)—Community-based clinical trials in prevention and treatment

1984

1985

➤ Health Promotion and Disease Prevention Amendments

➤ House emphasizes Epidemiologic studies

➤ OASH adopts NIH Prevention definition

➤ NHLBI appoints Director of Epidemiology and Clinical Applications

➤ Diabetes Control and Complications Trial begins

➤ Lipid Research Clinic's Coronary Primary Prevention Trial (LRC-CPPT) released

➤ Health Research Extension Act

➤ OASH releases: 1) 2nd edition report on Dietary Guidelines
2) Healthy People 2000 Midcourse Review

➤ Associate Director for Disease Prevention in OD, NCI, NHLBI, and NICHD

➤ NHLBI Smoking and Cholesterol Education Programs begin



Special populations studies—interventions designed to address cultural and behavioral barriers and obstacles unique to special population groups; health care delivery system barriers; primary prevention interventions designed to meet specific needs; facilitate cohesion of a strong core of current and potential researchers.

The Coronary Artery Surgery Study (CASS) results are released. They demonstrate that mildly symptomatic patients with coronary artery disease can safely defer coronary bypass surgery until symptoms worsen.

1984

The Health Promotion and Disease Prevention Amendments of 1984 amended the PHS act to extend provisions relating to health promotion and disease prevention and to establish centers for research and demonstration in

those areas. It required that the Director, NIH, be consulted as to procedures for peer review of applications; that NCHSR cooperate with NIH in its responsibilities pertaining to health care technologies; and that the director, NIH, serve on the newly established National Advisory Council on Health Care Technology Assessment. (P.L.98-551)

Prevention remains a high priority objective in cancer research. Emphasis on epidemiological studies has provided the Institute with information to estimate what external influences relate to cancer causation. The Institute's Cancer Control program is the focal point for applying research results to human populations. H: 98-357 (pg. 39-40)

Assistant Secretary for Health adopts NIH prevention research definition for all PHS agencies, recognizing that a shorter version would be employed at the OASH level.

The Division of Epidemiology and Clinical Applications is created. It provides the Institute with a single focus on clinical trials; prevention, demonstration, and education programs; behavioral medicine; nutrition; epidemiology; and biometry. It also provides new opportunities to examine the interrelationships of cardiovascular, respiratory, and blood diseases.

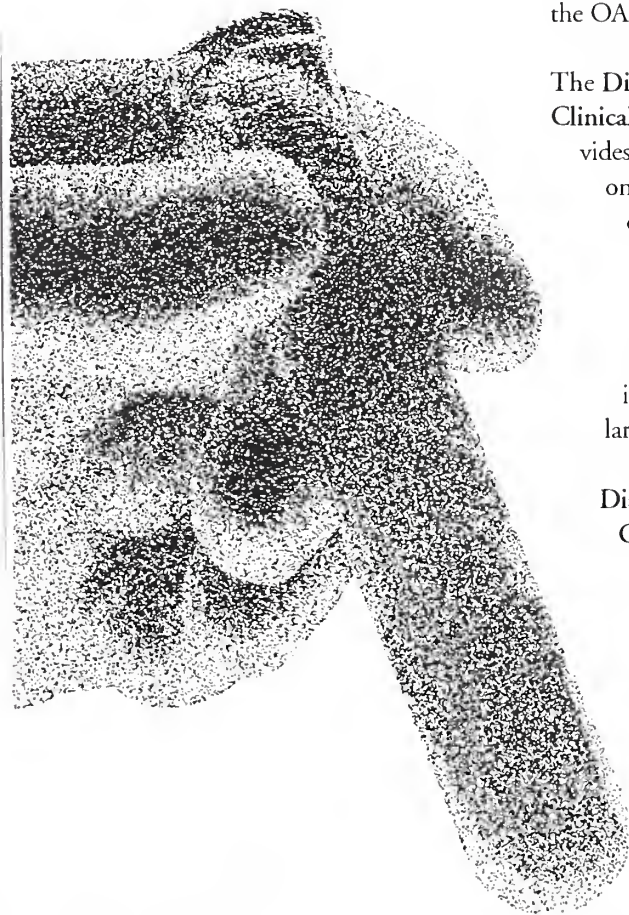
Diabetes Control and Complications Trial (DCCT) - designed to provide critical information on the role of hyperglycemia in the initiation and progression of diabetic microvascular disease in insulin-dependent diabetes and the efficacy of

reducing mean blood glucose in diminishing the risk of microvascular complications; the trial is designed for a 10 year period. If this trial establishes that near-normalization of blood glucose is effective in preventing and/or slowing progression of microvascular disease, intensification of insulin treatment is anticipated.

The results of the Lipid Research Clinic Coronary Primary Prevention Trial (LRC-CPPT) are released. They establish conclusively that reducing total blood cholesterol reduces risk of CHD in men at increased risk because of elevated cholesterol levels. Each 1 percent decrease in cholesterol can be expected to reduce heart attack risk by 2 percent.

1985

The Health Research Extension Act of 1985 (P.L.99-158; November 20, 1985) establishes positions of associate director for prevention in OD, NCI, NHLBI, and NICHD. The Associate Directors for Prevention should assure that each institute's research plans include sections dealing with such prevention related research as investigations into the epidemiology of diseases (including the effect of diet and other personal habits on the development of disease, and the effect of environmental factors, including air, water, radiation, and toxic substances, on the development of disease); research into immunizations against disease; studies of the means to preclude the development of disease through changes in personal habits and environmental factors; and studies of methods for, and the cost-effectiveness of, population screening programs. The Associate Directors should submit recommendations annually to the Director of the institute for the specific activities and resources required by the institute to carry out the prevention related activities.



Although the Committee proposal does not provide for establishment of a position of Associate Director for Prevention in all the national research institutes, each institute should give serious consideration to establishing such a position administratively.

The Associate Director for Prevention within the Office of the NIH Director has responsibility for promoting and coordinating the research programs of the national research institutes regarding the prevention of disease. The Associate Director is also responsible for coordinating NIH prevention activities with similar programs in other entities of the Department of Health and Human Services. The conferees believe the Associate Director should be a forceful competent representative for research regarding the prevention of disease. In appointing the Associate Director, the Director of NIH should seek an individual from among the nation's outstanding public health and prevention researchers. Section 402(f) of the conference agreement requires the Associate Director to report annually to the Director of NIH on the prevention related activities undertaken during the previous year. Section 403 provides that these annual reports should be included in the NIH Director's biennial report to the Congress.

The conferees reduced the frequency of required NIH reports to biennial but have required the new reports on prevention activities to be submitted annually. The House Committee on Energy and Commerce and the Senate Committee on Labor and Human Resources will closely monitor these reports and the activities of the associate Directors. It is the conferees intent to require this report on a biennial basis if it is evident that sufficient progress has been made in the prevention area. The OASH releases an updated report on Nutrition and Your Health: Dietary Guidelines for Americans that incorporates new dieting knowledge for dissemination to the public. An interim assessment resulted in the publication of The 1990 Health Objectives for the Nation: A Midcourse Review.

The NHLBI Smoking Education Program is initiated to increase health care provider awareness about clinical opportunities for smoking cessation programs, techniques for use within health care settings, and resources for use within communities to expand and reinforce such efforts.

The NHLBI inaugurates the National Cholesterol Education Program (NCEP) to increase awareness among health professionals and the public that elevated blood cholesterol is a cause of CHD and that reducing elevated blood cholesterol levels will contribute to the reduction of CHD.

*"...if the goal of
education in public
health is to change
behavior, then we,
as public health
educators, have
a lot to learn."*

FORMER SURGEON GENERAL
C. EVERETT KOOP, M.D.



1986

The Senate Committee on Labor and Human Resources establishes the President's Council on Health Promotion and Disease Prevention (S. 2057). The council is to be composed of fifteen members appointed by the President representing Federal, state, and local officials, academic institutions, and public and private organizations. In addition to advising the President on "maximizing personal health of Americans," the council is to encourage programs relating to health promotion and disease prevention.

The OASH appoints a PHS Steering Committee for Disease Prevention to oversee the process of revising the objectives to target the year 2000. The year 2000 priority areas expand upon

those of the 1990 objectives, with the addition of areas focused on topics such as HIV infection and cancer.

The CDC initiates the Prevention Centers Program and to the degree appropriate, utilizes the NIH grant review process as applied to centers. The focus of these centers is a series of projects relating to a public health theme related to special populations, risk factors, or specific health conditions.

1987

The OASH, with the help of the PHS Steering Committee, begin the process of identifying measurable national health goals and objectives for the year 2000. The NIH provides scientific bases and considerable mortality and morbidity

data toward development of Healthy People 2000.

NIH becomes a smoke-free agency; the first major (more than 200 personnel) governmental agency to become smoke-free without designated smoking areas. Smoking cessation programs are made available on a regular basis to all staff willing to participate, free of charge.

The National Institute of Allergy and Infectious Diseases (NIAID) begins the first clinical trial of an experimental vaccine against HIV (human immunodeficiency virus), the virus that causes AIDS. Scientists at NIAID are among the first to describe the precise immune defect that occurs in AIDS patients.

1986

1987

ADMINISTRATION

CONGRESS

DEPARTMENT

NIH

SCIENTIFIC COMMITMENT

- Establishes President's Council on Health Promotion and Disease Prevention

- OASH appoints PHS Steering Committee for Disease Prevention

- CDC Prevention Centers—NIH provides review guidance

- Development of Healthy People 2000 objectives

- NIH provides scientific bases for Healthy People 2000

- NIH becomes smoke-free agency

- NIAID first Clinical Trial on Experimental Vaccine against HIV

1988

The Health Omnibus Programs Extension Act of 1988 (P.L.100-607) amended language for several institutes to state that the purpose of the Institutes information and education activities is "to increase the awareness and knowledge of health care professionals and the public regarding the prevention of [identified infectious and chronic diseases]."

Release of the Surgeon General's Report on Nutrition and Health. NIH provides much of the scientific knowledge for the first Comprehensive documentation on recommended dietary changes.

1989

The Senate (S:100-399) cites that NCI epidemiology has identified many cancer causing agents such as cigarette

smoke, tobacco, occupational chemicals, viruses, and, more recently, nutrients in the diet. These data, published in numerous reports, have made important contributions to the cancer prevention and control efforts.

The OASH releases the Guide to Clinical Preventive Services. The NIH provides in-house review for the scientific bases for each chapter of preventive health services.

The NHLBI initiates a National Asthma Education Program to raise awareness of asthma as a serious chronic disease and to promote more effective management of asthma through patient and professional education.

*"Under every
deep a lower
deep opens."*

RALPH WALDO EMERSON

1988

1989

➤ Health Omnibus Programs Extension Act

➤ Senate cites Cancer Prevention efforts

➤ Surgeon General's Report on Nutrition and Health

➤ OASH issues Guide to Clinical Preventive Services

➤ NHLBI initiates a National Asthma Education Program

➤ NIH provides scientific bases for Surgeon General's Report on Nutrition and Health

➤ NIH provides significant scientific review for Guide to Clinical Preventive Services



1990

Projects are underway to promote cancer prevention awareness, to work with state health agencies in prevention and control, to improve access to state-of-the-art cancer diagnosis and care, and to disseminate breast cancer information, cancer detection guidelines, patient education, and information for minority groups. H: 101-172 (pgs. 51-52) S: 101-127 (p. 110)

The Omnibus Budget Reconciliation Act of Response, Compensation and Liability Act called on the secretary, with NCI, to review periodically the appropriate frequency for performing screening mammography.

OASH implements Put Prevention Into Practice (PIPP), a project designed to help achieve the goals of Healthy People 2000 by improving the delivery of clinical preventive services. The NIH helps in the review of grant applications submitted in response to a request for applications (RFAs) in implementing the PPIP program.

The first human gene therapy protocol in history is undertaken at NIH. A team of scientists, led by W. French Anderson, NHLBI, and R. Michael Blaese, NCI, insert a normal gene into a patient's cells to compensate for a defective gene that left the patient's cells unable to produce an enzyme essential to the functioning of the body's immune system.

1991

The Senate Committee is disturbed to learn that more emphasis is not being placed on prevention and education programs within the NCI. Cancer prevention is crucial to our ability to control the incidence of cancer. The Committee is concerned that only \$75,000,000 or less than 5 percent, of the total NCI budget for 1990 is allocated to cancer prevention research efforts. H: 101-591 (pgs. 56-57)

The scientific methodology exists to proceed with such a study, and the Senate Committee directs the NCI and NHLBI to cooperatively and aggressively move forward on an intervention trial on the role of fat reduction in the prevention of cancer and heart disease in women. S:101-516 (pgs. 91-92)

1990

1991

ADMINISTRATION

CONGRESS

- House and Senate cite NCI Prevention and Control Program

- House and Senate disturbed by NCI lack of emphasis on Prevention and Control
- Senate directs NCI and NHLBI to work on Women's Intervention Trial

DEPARTMENT

- OASH implements Put Prevention Into Practice

NIH

- NIH contributes to review of Put Prevention Into Practice Projects

- NHLBI Obesity Education Initiative
- First NIH Health and Behavior Report

SCIENTIFIC COMMITMENT

- First human gene therapy experiment

- Task Force on Hypertension sets scientific priorities
- Release of National Asthma Education Program report

The NHLBI Obesity Education Initiative begins. Its objective is to make a concerted effort to educate the public and health professionals about obesity as an independent risk factor for CVD and its relationship to other risk factors such as high blood pressure and high blood cholesterol.

The NIH Office of Disease Prevention, with the aid of the institutes, centers, and divisions, prepare the first report for Congress on NIH Health and Behavior Research.

The Task Force on Hypertension, established in November 1989 to assess the state of hypertension research and to develop a plan for future NHLBI

funding, presents its conclusions. The report outlines a set of scientific priorities and develops a comprehensive plan for support over the next several years.

The expert panel on the National Asthma Education Program releases its report, Guidelines for Diagnosis and Management of Asthma, to educate physicians and other health care providers in asthma management.

1992

The Preventive Health Amendments of 1992 provide authorities regarding the coordination of Federal programs related to preventable cases of infertility arising as a result of sexually transmitted dis-

eases; also delineates coordination between the director, CDC, and director, NIH. (P.L.102-531)

The Committee has heard testimony regarding the application of prevention research on an international basis. To maximize current international efforts and capitalize on new opportunities, the Committee urges the Institute to more aggressively pursue international collaboration in cancer prevention, with special emphasis on training and information dissemination.

1992

- Preventive Health Amendments of 1992
- House directs NCI to do more in International Cancer Prevention Cancer Registries Act
- Alcohol, Drug Abuse, and Mental Health Reorganization Act

- Increased coordination in prevention between NIH and CDC

- Trials of Hypertension Prevention Phase I released

1993

- NIH Revitalization Act of 1993
- Preventive Health Amendments of 1993

- Creation of Office of Alternative Medicine and Research on Women's Health
- Conference on "Disease Prevention Research at NIH: an Agenda for All"

- Issued NIH Implementation Plan for Health and Behavior Research

*"Sensing a
problem is often
the real starting
point for scientific
discoveries"*

KARL POPPER

NIH HISTORICAL REPORT ON DISEASE PREVENTION

The Alcohol, Drug Abuse, and Mental Health (ADAMHA) Reorganization Act, amended by the PHS act to provide for the incorporation of the three ADAMHA research institutes—NIMH, NIAAA, and NIDA—into the NIH as of October 1, 1992.

The NIH Coordinator for Disease Prevention appointed by the Secretary, HHS, to the CDC Prevention Centers Review Committee.

Results of the Trials of Hypertension Prevention Phase I are published. They demonstrate that both weight loss and reduction of dietary salt reduce blood pressure in adults with high normal diastolic blood pressure and may reduce the incidence of primary hypertension.

1993

The NIH Revitalization Act (P.L. 103-43) amended NHLBI language on prevention and control programs to require that special consideration be given to prevention and control of heart, blood vessel, lung, and blood diseases in children and high risk populations. "...the Conferees expect the Director of NCI to assure that DCPC is concentrating its limited resources on preventing the development of cancer or reducing the incidence of cancer by modifying risk factors through changes in behavior (Conference Report 103-100 p. 113). The NIH Revitalization Act of 1993 also reauthorized certain expiring authorities of the NIH; mandated inclusion of women and minorities in clinical research protocols; created in statute the Office of Alternative Medicine, the Office of Research on Women's Health, the Office of Biobehavioral and Social Sciences Research, and the National Center for Human Genome Research; and provided other new NIH authorities and directives.

The Preventive Health Amendments of 1993 required the director, NIAID, to conduct or support research and research training regarding the cause, early detection, prevention and treatment of tuberculosis. (P.L. 103-183).

The OD, NIH, sponsors the first trans-NIH prevention conference entitled: "Disease Prevention Research at NIH: An Agenda for All." This crosscutting conference is designed to chart a course for an NIH-wide agenda for future prevention research activities.

Report is issued "NIH Implementation Plan for Health and Behavior Research 1993: Report to Congress" is in response to a Congressional request that the NIH followup to a November 1991 report to Congress on NIH Health and Behavior Research with an implementation plan.

1994

Senate committee urges the NCI to work with the CDC and other PHS agencies to develop program of coordination to insure the best utilization of Federal resources for cancer research and control activities (Senate Report 103-143 (pg. 81).

House anticipates that increased funding will be used to fully fund each of the existing 19 ASSIST states and support related programs in each of the 33 states without ASSIST programs (House Conference Report 103-100 (pgs. 113-114).

NCI follow-up on House and Senate request to fully fund ASSIST program.

September 1994 issue of Preventive Medicine journal devoted to papers presented at trans-NIH prevention meeting entitled: "Disease Prevention at NIH: An Agenda for All" (Preventive Medicine 23, 547-767 (1994).

In cooperation with the Office of Medical Applications of Research (OMAR) the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) sponsored a consensus conference on *Helicobacter pylori* in Peptic Ulcer Disease, including the prevention of its recurrence with treatment of the infection with certain antibiotics in combination with other selected drugs.

The NIDDK National Task Force on Prevention and Treatment of Obesity issued its report on the combination of basic and clinical research approaches to the prevention of obesity which included the intervention program known as the Weight Control Information Network.

1995

The mid-decade review of Healthy People 2000 demonstrated that the U.S. is moving in the right direction on more than two-thirds of the national health objectives. This mid-course review includes 19 new objectives and 123 new special population targets in an effort to narrow, or possibly eliminate, the gap between certain population groups and the total population.

NIH institutes, centers, and divisions aid in identifying disease incidence and mortality rates, especially as these rates affect identified special population groups. Working cooperatively with the National Center for Health Statistics the NIH is able to contribute data and identify existing data bases previously not utilized.

The NIDDK's newest multicenter clinical trial, the Diabetes Prevention Program (DPP), is introduced. This trial is designed to prevent or delay the onset of non-insulin-dependent, or Type II diabetes, in individuals at risk for developing this disease. Patient screening and recruitment for this primary prevention, community-based study is scheduled to begin in June 1996. This is a follow-up program to the Diabetes Control and Complications Trial (DCCT).

1994

ADMINISTRATION

CONGRESS

- Senate encourages NCI to coordinate Control Activities with CDC and PHS agencies
- House encourages funding NCI Assistance Program

DEPARTMENT

NIH

- NCI fully funds ASSIST Program
- Preventive Medicine Journal devoted to NIH Prevention Meeting

SCIENTIFIC COMMITMENT

- Consensus Conference on H Pylori
- National Task Force on Prevention and Treatment of Obesity

1995

- Healthy People 2000 Midcourse Review /1995 Revisions

- NIH/PHS Steering Committee members contribute to Healthy People 2000 Midcourse Review Revisions

- Diabetes Prevention Program and Followup to DCCT

1996

Senate committee encourages the NCI to aggressively pursue cancer prevention and control research which focuses on affecting these (70 percent of all cancers are related to such factors as diet or smoking) lifestyle choices. (Senate Report 104-145, pg. 68).

The Office of the Assistant Secretary for Health (OASH) sponsors several meetings to solicit opinions on the direction planning should proceed in developing the objectives for Healthy People 2010. Members of the HP Steering Committee (federal) and HP Consortia Group (non-federal), attend planned meetings to make suggestions on how HP2010 should be packaged.

NCI and OMAR co-sponsor consensus meeting to update the existing statement on Cervical Cancer Screening (April 13).

1997

Senate committee urges the NCI to conduct an inter-institute initiative of basic and applied research on the psychosocial factors involved in treating cancer, AIDS, diabetes, heart disease, and other diseases with a behavioral component. The Committee intends that grants for such research be made to cancer centers which have personnel and facilities to conduct psychosocial and complementary medicine research projects on diverse ethnic and racial populations (Senate Report: 104-368)(pg. 73).

The OASH continues with progress reviews of the 22 identified priority areas comprising HP2000 objectives for the Nation.

The NIH has scheduled consensus meetings addressing many prevention-relevant topics:

1. Breast Cancer Screening for Women Ages 40-49 (January)
2. Interventions to Prevent HIV Risk Behaviors (February)
3. Management of Hepatitis C (March)
4. Genetic Testing for Cystic Fibrosis (April)

1996

1997

ADMINISTRATION

CONGRESS

- Senate encourages NCI to aggressively pursue Cancer Prevention and Control affecting lifestyle choices

- Senate encourages NCI to conduct Psychosocial and Complementary Medicine Research

DEPARTMENT

- OASH sponsors meetings to identify needs for Healthy People 2010

- OASH continues to conduct Healthy People 2010 progress reviews

NIH

- NIH with other PHS agencies identify needs for Healthy People 2010

SCIENTIFIC COMMITMENT

- CDC Cervical Cancer

- Consensus Development Conference on: Breast Cancer Screening; Interventions to Prevent HIV Risk Behaviors; Management of Hepatitis C; Genetic testing for Cystic Fibrosis

/ *Cream*

Timeline of U.S./Canadian Societal Priorities for Emphasizing Disease Prevention and Health Promotion

- 1971** President Nixon called for a comprehensive health education program based on the concept that each individual bore responsibility for their own health;
- 1974** CDC implements recommendations of President's Committee and creates Bureau of Education;
- Canadian Minister of National Health and Welfare issues the Lalonde Report: **A New Perspective on the Health of Canadians**. This report is a provocation for the U.S. to do more in promoting health and preventing disease;
- 1975** Kennedy-Carter bill requests a highly visible office for Consumer Health Education be created in the Office of the Assistant Secretary for Health;
- NIH Fogarty International Center and American College of Preventive Medicine co-sponsor a National Conference on Prevention resulting in the publication **Preventive Medicine USA**;
- 1976-77** President, Congress, Secretary DHEW, and Assistant Secretary for Health, all make strong public endorsements of prevention.

Historical Initiatives and Documents That Have Impacted the National Institutes of Health

- 1978** Public Health Service contracts with the National Academy of Sciences to conduct a conference on prevention to review a draft document prepared by the Institute of Medicine;
- DHEW Task Force on Prevention issues "Disease Prevention and Health Promotion: Federal Programs and Prospects" designed to perform first comprehensive review of Departmental programs;
- 1979** Healthy People: The Surgeon's Report on Health Promotion and Disease Prevention; the first Surgeon General's report on disease prevention, purpose was to encourage a second public health revolution;
- 1980** Promoting Health/Preventing Disease: Objectives for the Nation, established first measurable national health goals and objectives;
- 1980** Cooperative effort with USDA to produce report
1985 on Nutrition and Your Health: Dietary Guidelines for Americans,
1990 first effort to educate the public on nutrition;

- 1987-90** Development of **Healthy People 2000**, helped to identify measurable national health goals and objectives for the year 2000;
- Provided scientific insight and considerable data toward development of **Healthy People 2000**, a statement of measurable national health goals and objectives for the year 2000;
- 1988** Development of the **Surgeon General's Report on Nutrition and Health**, provided much of the scientific bases for the first comprehensive documentation on recommended dietary changes;
- 1989** Provided scientific evidence in support of the U.S. Preventive Services Task Force **Guide to Clinical Preventive Services**;
- 1990** Reviewed projects for implementation of **Put Prevention Into Practice**, a project designed to help achieve the goals of **Healthy People 2000** by improving the delivery of clinical preventive services;
- 1991** NIH Office of Disease Prevention with the aid of the institutes, centers, and divisions prepared the first report for Congress on **NIH Health and Behavior Research**;
- 1993** Sponsored conference on "**Disease Prevention Research at NIH: AN Agenda for All**," first cross cutting conference designed to chart a course for an NIH-wide agenda for future prevention research activities;
- Issued an **NIH Implementation Plan for Health and Behavior Research** in response to Congressional request and set the stage for the creation of an Office of Behavioral and Social Sciences Research;
- In cooperation with the Centers for Disease Control and Prevention (CDC) a compilation of **NIH-Supported Studies on Injury Prevention and Control** was accomplished that included research projects supporting prevention, acute care, rehabilitation, and manpower training;
- 1994** Publication of **Disease Prevention Research at NIH: An Agenda for All** in **Preventive Medicine** journal;
- 1995** **Healthy People 2000 Midcourse Review and 1995 Revisions**, The NIH as lead agency for two priority areas and co-lead for five priority areas has been responsible for evaluations and tracking progress of the goals set for **Healthy People 2000**;
- 1996** In cooperation with other PHS agencies, the NIH has actively participated in identifying and evaluating the needs for **Healthy People 2010**.

DHHS-National Institutes of Health Prevention Budgets

Dollars in thousands

	1995	1996
NCI	\$812,975	\$857,399
NHLBI	206,908	213,400
NIDR	42,642	45,595
NIDDK	157,000	164,200
NINDS	62,950	66,087
NIAID	289,399	306,786
NIGMS	5,553	5,778
NICHD	246,573	257,600
NEI	89,199	93,588
NIEHS	224,050	239,592
NIA	237,363	245,000
NIAMS	65,553	68,750
NIDCD	25,663	27,321
NIMH	83,218	87,086
NIDA	62,608	64,700
NIAAA	36,367	37,900
NCRR	106,153	116,768
NINR	14,090	15,000
NCHGR	48,344	51,733
FIC	7,582	7,600
NLM	48,719	59,918
TOTAL NIH	\$2,872,909	\$3,031,801

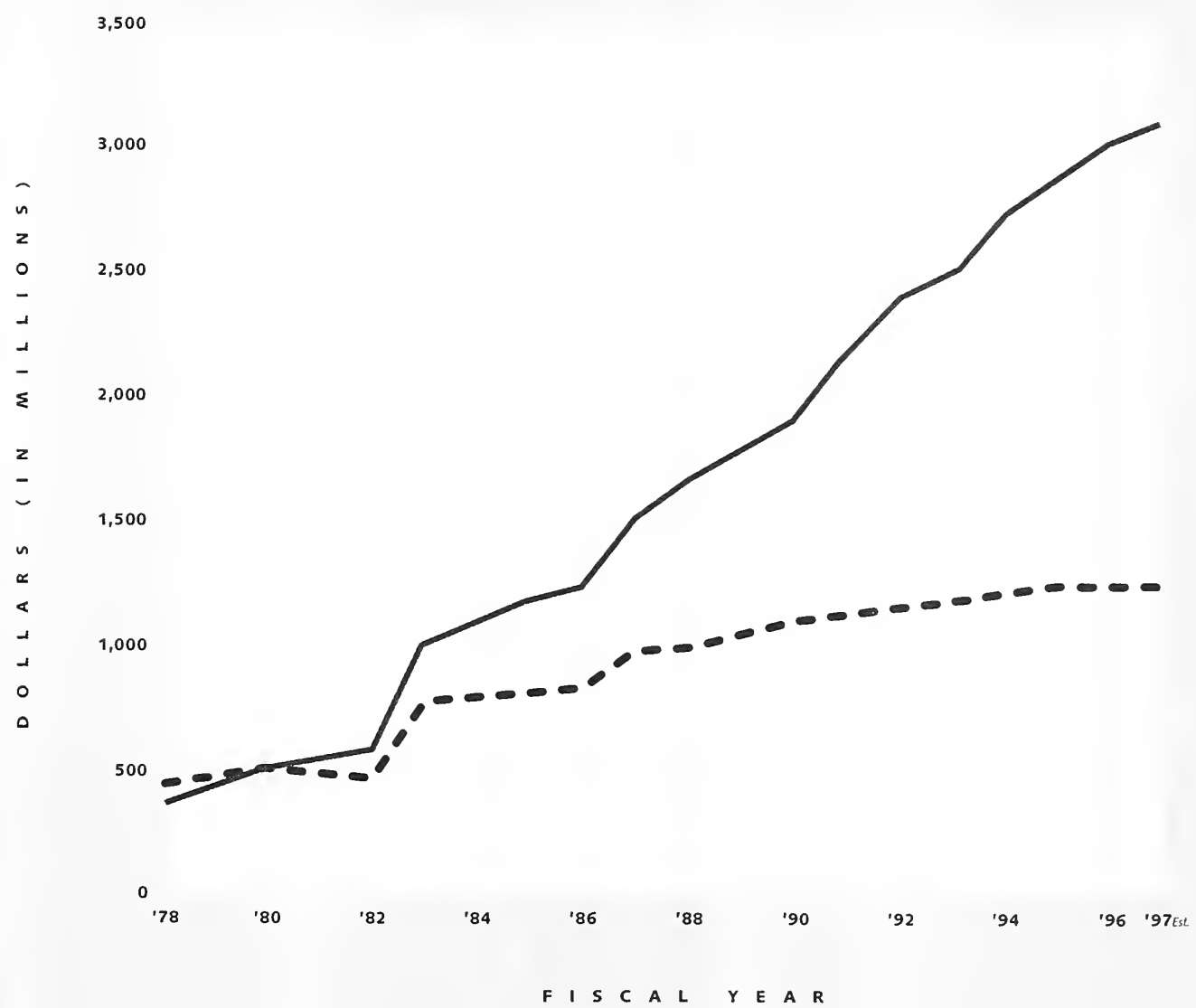


Year	NIH Funding (Current \$)	Prevention Funding (Current \$)	Base Year 1980=100 Price Index	Prevention Funding (Constant \$)	Prevention vs. Overall NIH (Percent)
1978	2,387,554	352,121	84.5	416,711	14.75
1979	2,781,906	419,476	91.5	458,444	15.08
1980	2,991,684	506,459	100.0	506,459	16.93
1981	3,135,479	542,416	109.7	494,454	17.30
1982	3,222,165	602,549	119.2	505,494	18.70
1983	4,309,421	957,152	126.1	759,042	22.21
1984	4,827,757	1,075,712	133.4	806,381	22.28
1985	5,497,098	1,180,370	140.4	840,719	21.47
1986	5,688,749	1,233,385	146.3	843,052	21.68
1987	6,688,749	1,532,439	154.1	994,445	22.91
1988	7,186,959	1,640,018	161.8	1,013,608	22.82
1989	7,893,586	1,789,961	170.2	1,051,681	22.68
1990	8,505,256	1,905,639	179.6	1,061,046	22.41
1991	9,217,940	2,187,993	188.3	1,161,972	23.74
1992	10,010,368	2,368,505	198.6	1,192,601	23.66
1993	10,328,117	2,484,257	203.3	1,221,966	24.05
1994	10,910,989	2,734,163	211.2	1,294,585	25.06
1995	11,340,841	2,872,909	218.1	1,317,244	25.33
1996	11,927,562	3,031,801	226.8	1,336,773	25.42
1997	12,747,203	3,092,695e	234.1	1,321,100e	24.26e

Cream bkgrnd.

Disease Prevention Research Funding

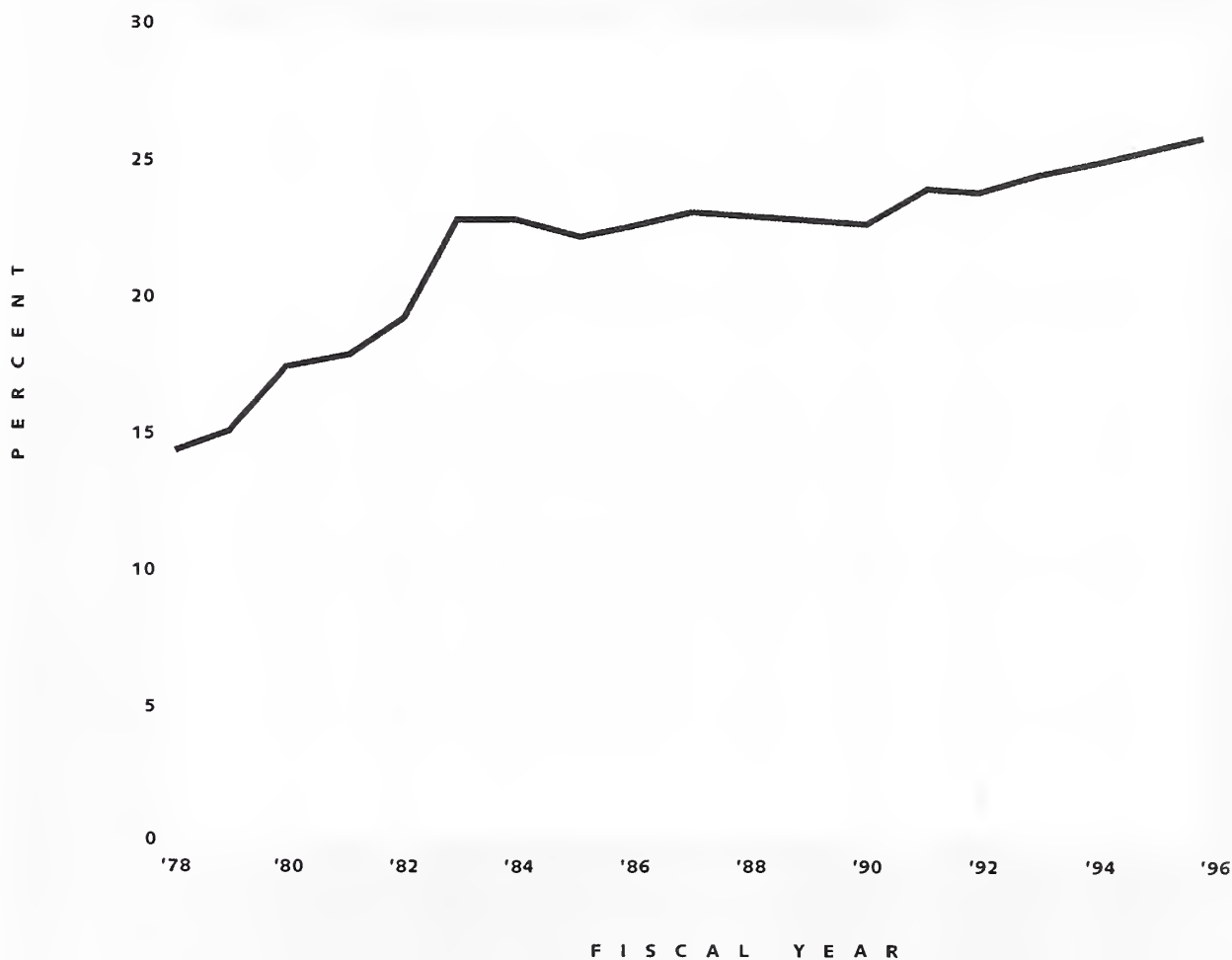
1978-1997



*FY 1980=100. Constant dollars based on Biomedical R&D Price Index.

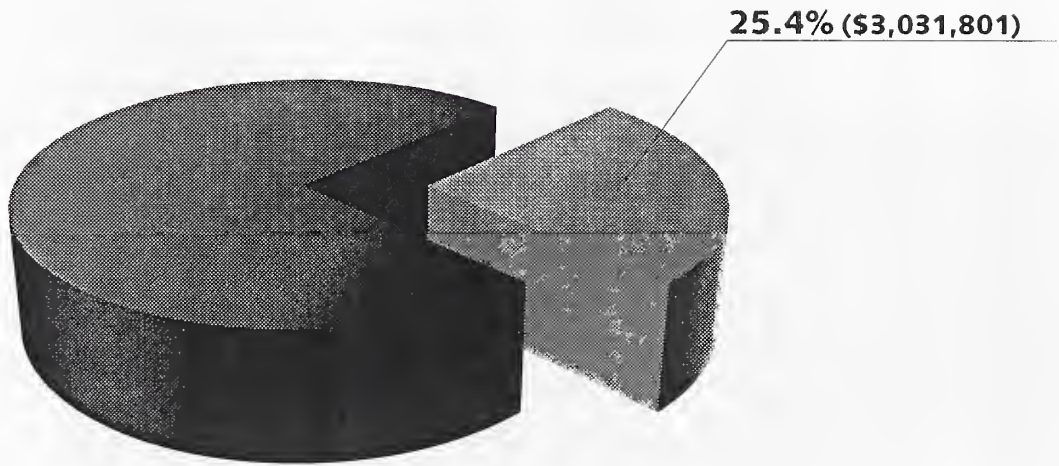


Disease Prevention Research as Percentage of Overall NIH Funding 1978-1996



Cream beyond.

**Proportion of NIH Research
Defined as Prevention-Related**
1996



Total NIH Support \$11,927,562
(FY 1996)

Source: NIH, 1996

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